



Name _____ Date _____

Reteaching: For use after Lesson 1.4, Algebra 2 with Trigonometry

Properties of Real Numbers

■ **Concept:** Identifying and using the properties of the real number system

Remember: The closure, commutative, associative, identity, inverse, and distributive properties of real numbers are accepted without proof and are called postulates.

Example: Justify each statement.

$29 + 46 = (20 + 9) + (40 + 6)$	Definition of addition
$= 20 + [9 + (40 + 6)]$	Associative property of addition
$= 20 + [(40 + 6) + 9]$	Commutative property of addition
$= (20 + 40) + (6 + 9)$	Associative property of addition
$= 60 + 15$	Definition of addition
$= 75$	Definition of addition

State whether each of the following is true or false and give the reason if it is true.

1. $(1 + 5) + 2 = 1 + (5 + 2)$ _____

2. $10(x + y) = 10x + 10y$ _____

3. $8 - 1 = 1 - 8$ _____

4. $6 + (-6) = 0$ _____

5. $1 \div 4 = 4 \div 1$ _____

Justify each step.

6. $25 \cdot 6 = (20 + 5) \cdot 6$ _____

7. $= (20 \cdot 6) + (5 \cdot 6)$ _____

8. $= 120 + 30$ _____

9. $= (100 + 20) + 30$ _____

10. $= 100 + (20 + 30)$ _____

11. $= 100 + 50$ _____

12. $= 150$ _____